CLAIMS:

1. A process for converting a wax, having hydrocarbons primarily within C_{24}-C_{110} with essentially no sulfur or nitrogen content, to an isoparaffinic lube basestock, comprising:

first, passing the wax and a hydrogen co-feed over a unidimensional molecular sieve catalyst comprising a unidimensional intermediate pore molecular sieve with near circular pore structures having an average diameter of 0.50 nm to 0.65 nm wherein the difference between a maximum diameter and a minimum diameter is $\leq$ 0.05 nm and one or more Group VIII metals to form an intermediate product; and

second, passing the intermediate product over a Beta catalyst comprising a Zeolite Beta and one or more Group VIII metals;

to form the isoparaffinic lube basestock.

2. A process according to claim 1, wherein

the wax comprises about 5 wt% to about 80 wt% of a 1,100°F+ fraction, based on the total weight of the wax;

the unidimensional molecular sieve catalyst is kept at a temperature of 500 to 800°F (260 to 427°C);

the Beta catalyst is kept at a temperature of 400 to 700°F (204 to 371°C);

the wax is passed over the unidimensional molecular sieve catalyst at a feed liquid hourly space velocity of 0.1 to 10 h^{-1};

the intermediate product is passed over the Beta catalyst at a feed liquid hourly space velocity of 0.1 to 10 h^{-1}; and

the process further comprises less than about 1,500 psig (102 atm) hydrogen, wherein the hydrogen is circulated at 100 to 10,000 scf/bbl (18 to 1780 $n.L.L^{-1}$).

3. A process according to claim 2, wherein

the unidimensional molecular sieve catalyst is kept at a temperature of 600-700°F (316 to 371°C);

the Beta catalyst is kept at a temperature of 500-600°F (260 to 316°C);

the wax is passed over the unidimensional molecular sieve catalyst at a feed liquid hourly space velocity of 0.5 to 2 h^{-1};

the intermediate product is passed over the Beta catalyst at a feed liquid hourly space velocity of 0.5 to 2 h^{-1}; and

the process further comprises less than about 1,500 psig (102 atm) hydrogen, wherein the hydrogen is circulated at 1,000 to 6,000 scf/bbl (178 to 1068 $n.L.L^{-1}$).

4. A process according to claim 3, wherein the Group VIII metal on said catalysts is at least one member selected from the group consisting of Pt and Pd; and the unidimensional molecular sieve catalyst is ZSM-48 with a Alpha value of 10 to 50 prior to the metal incorporation.

5. A process according to claim 3, wherein

the wax has a 1,000°F+ high temperature tail;

the ZSM-48 is loaded with about 0.5 wt% to about 1 wt% of the Group VIII metal, based on the total weight of the ZSM-48;

the Zeolite Beta has an Alpha value less than about 15 prior to loading with the Group VIII metal;

the Zeolite Beta is loaded with about 0.5 wt% to about 1 wt% of the Group VIII metal, based on the total weight of the Zeolite Beta; and

the Group VIII metal is at least one member selected from the group consisting of Pt and Pd.

6. A process according to claim 5, wherein

the Beta catalyst is Pt/Beta; and

the Pt/ZSM-48 and the Pt/Beta are in a cascaded two-bed catalyst system comprising a first bed followed by a second bed, wherein the first bed comprises the Pt/ZSM-48 catalyst and the second bed comprises the Pt/Beta catalyst.

7. A process according to claim 6, wherein

the temperature of the first bed and the temperature of the second bed are controlled independently; and

the intermediate product is cascaded directly to the second bed.

8. An isoparaffinic lube basestock made by the process according to claim 1, wherein

the isoparaffinic lube basestock has a viscosity index of at least 150 at a -20°C lube pour point and a viscosity index of at least 130 at a pour point of no more than -50°C.

9. An isoparaffinic lube basestock made by the process according to claim 1, wherein the isoparaffinic lube basestock has less than 1 wt% aromatic content.

10. A lubricant with a viscosity index of at least 150 at a -20°C lube pour point and a viscosity index of at least 130 at a pour point of no more than -50°C made by the process according to claim 1.

11. A lubricant with a viscosity index of at least 150 at a -20°C lube pour point and a viscosity index of at least 130 at a pour point of no more than -50°C made by the process according to claim 6.

12. A process according to claim 1, wherein the passing of the wax and the intermediate product over said catalysts is conducted under conditions sufficient to form an isoparaffinic lube basestock with a viscosity index of at least 150 at a -20°C lube pour point and a viscosity index of at least 130 at a pour point of no more than -50°C.

13. A process according to claim 5, wherein the passing of the wax and the intermediate product over said catalysts is conducted under conditions sufficient to form an isoparaffinic lube basestock with a viscosity index of at least 150 at a -20°C lube pour point and a viscosity index of at least 130 at a pour point of no more than -50°C.